## IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

POLAROID CORPORATION	)
Plaintiff,	)
v.	) C.A. No. 06-738 (SLR)
HEWLETT-PACKARD COMPANY,	) REDACTED VERSION
Defendant.	)

## POLAROID CORPORATION'S OPENING BRIEF IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT UNDER 35 U.S.C. § 287

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## TABLE OF CONTENTS

TAB	LE OF	AUTH	ORITIES	iii
NAT	URE A	ND ST	AGE OF THE PROCEEDING.	1
SUM	MARY	OF AF	RGUMENT	1
STA	ГЕМЕ	NT OF I	FACTS	2
	A.	Polar	roid's '381 Patent	2
	B.	Polar	oid's Products And Technologies	5
	C.	Polar	roid's Sole Licensee To The '381 Patent	7
ARG	UMEN	T		8
I.			SUANCE CONSTITUTES CONSTRUCTIVE NOTICE WHERE TED ARTICLES ARE MADE, OFFERED FOR SALE, OR SOLD	8
II.			RROGATORY RESPONSES NEVER IDENTIFIED A POLAROID THAT WAS REQUIRED TO BE MARKED	12
III.	II. POLAROID HAD NO DUTY TO MARK BECAUSE IT NEVER MADE, OFFERED FOR SALE, OR SOLD A PRODUCT EMBODYING THE CLAIN OF THE '381 PATENT		13	
	A.		nin Polaroid Technologies Were Never Used Or Incorporated In A	14
	B.		roid Never Made, Offered For Sale, Or Sold A Product Embodying ns 1–5 Of The '381 Patent.	14
	C.	Polaroid Never Made, Offered For Sale, Or Sold A Product Embodying Claim 6 Of The '381 Patent		
	D.	Polaroid Never Made, Offered For Sale, Or Sold A Product Embodying Claim 7 Of The '381 Patent.		17
		1.	Claim 7	17
		2.	Claim 7, preamble	18
		3.	Claim 7, Element 1.	18
		4.	Claim 7, Element 2.	19
		5.	Claim 7, Element 3.	20
		6.	Polaroid's dodge and burn technology does not embody Elements 1–3 of Claim 7.	21

		7.	Polaroid's adaptive sharpening technology does not embody Elements 2 and 3 of Claim 7	22
		8.	Conclusion regarding Claim 7.	23
	E.		roid Never Made, Offered For Sale, Or Sold A Product Embodying ns 8–13 Of The '381 Patent.	23
IV.	MAD	E, OFF	'S LICENSEE HAD NO DUTY TO MARK BECAUSE IT NEVER FERED FOR SALE, OR SOLD A PRODUCT EMBODYING THE THE '381 PATENT	24
CON		)N		25

## **TABLE OF AUTHORITIES**

## Cases

Am. Med. Sys., Inc. v. Med. Eng'g Corp., 6 F.3d 1523 (Fed. Cir. 1993)	9
Anderson v. Liberty Lobby, Inc., 477 U.S. 242 (1986)	8
Avia Group Intern., Inc. v. L.A. Gear California, Inc., 853 F.2d 1557 (Fed. Cir. 1988)	8
Broadcom Corp. v. Agere Systems, Inc., No. Civ.A. 04-2416, 2004 WL 2009320 (E.D. Pa. Sept. 8, 2004)	passim
Church & Dwight Co., Inc. v. Abbott Labs., Civil Action No. 05-2142, 2007 WL 1959272, at (D. N.J. July 5, 2007)	11
Clancy Sys. Int'l, Inc. v. Symbol Techs., Inc., 960 F. Supp. 1170 (D. Colo. 1997)	10
Elonex Phase II Power Mgmt. Litig., No. 01-082, 2002 WL 242363 (D. Del. Feb. 20, 2003)	10
Laitram Corp. v. Hewlett-Packard Co., Inc., 806 F. Supp. 1294 (E.D. La. 1992)	10, 11
Loral Fairchild Corp. v. Victor Company of Japan, Ltd., 906 F. Supp. 813 (E.D. N.Y. 1995)	10
Medical Graphics Corp. v. Sensormedics Corp., Civ. No. 3-94-525 1995 WL 523633 (D. Minn. June 5, 1995)	10
Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002)	9
Tulip Computers Int'l B.V. v. Dell Computer Corp., Civil Action No. 00-981-KAJ2003, WL 1606081 (D. Del. Feb. 4, 2003)	10

Unova Inc. v. Hewlett-Packard,	
No. CV 02-3772,	
2006 WL 5434534 (C.D. Cal. Feb. 16, 2006)	10, 11
Wine Ry. Appliance Co. v. Enter. Ry. Equip. Co.,	
297 U.S. 387 (1936)	
Workas v. Dresser Indus., Inc.,	
978 F. Supp. 839 (N.D. Ind. 1997)	10
Statutes	
35 U.S.C. § 112	15, 24
35 U.S.C. § 287	passim
Rules	
Fed. R. Civ. P. 30(b)(6)	5, 13
Fed. R. Civ. P. 56(c)	8

## NATURE AND STAGE OF THE PROCEEDING

Plaintiff Polaroid Corporation ("Polaroid") brought suit against Defendant Hewlett-Packard Company ("HP") for infringing Claims 1–3 and 7–9 of Polaroid's United States Patent No. 4,829,381 ("the '381 patent"). The '381 patent discloses and claims an invention for improving or enhancing a digital image. The invention in the '381 patent enhances the appearance of digital pictures taken with a camera and then subsequently viewed on the camera. a computer, or in a hardcopy print from a printer. The invention in the '381 patent enhances the image by altering the contrast at the specific areas of the image that need enhancing; in particular, the dark areas are made lighter and the light areas are made darker. This enhancement draws out detail that otherwise would be lost in digital images. HP asserts that Polaroid's "claims for damages are limited by 35 U.S.C. § 287(a)." Ex. B. Answer and Counterclaims ¶ 23. Pursuant to the Court's September 6, 2007 Amended Scheduling Order, claim construction briefing is complete. Fact discovery closed on February 1, 2008, and expert discovery closed on May 9, 2008. Polaroid hereby moves for summary judgment that its damages claims are not limited by 35 U.S.C. § 287(a).

### SUMMARY OF ARGUMENT

- 1. Although HP alleges that Polaroid has not complied with 35 U.S.C. § 287 (a) because Polaroid did not mark its products with the '381 patent, neither Polaroid nor its licensee had a duty to mark. HP never identified in its interrogatory responses any products made, offered for sale, or sold by Polaroid or its licensee under the '381 patent that required marking and cannot raise these products at summary judgment.
- 2. Even the Polaroid products inappropriately and belatedly referenced by HP outside the interrogatory responses unequivocally do not embody the claims of the '381 patent. They are not patented articles and do not require marking under Section 287.

3. Because neither Polaroid nor its sole licensee under the '381 patent has made, offered for sale, or sold products embodying the invention claimed in the '381 patent, the issuance of the '381 patent from the United States Patent and Trademark Office ("USPTO") is sufficient notice under the marking statute. *See, e.g., Wine Ry. Appliance Co. v. Enter. Ry. Equip. Co.*, 297 U.S. 387, 393 (1936).

## **STATEMENT OF FACTS**

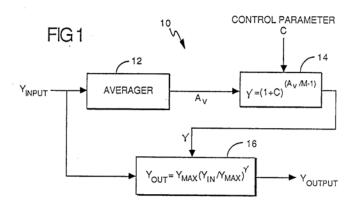
### A. Polaroid's '381 Patent.

Drs. Woo-Jin Song and Donald S. Levinstone are the inventors of the '381 patent. J.A. Ex. A, '381 Pat., cover page.¹ The '381 patent discloses and claims their invention for a system and method that recovers loss of brightness detail in areas of a digital image that are either too dark or too light. *Id.*, col. 1, lines 48–50. Their approach alters contrast based on brightness conditions at specific areas of a digital image—i.e., the lightness or darkness of areas of the image—rather than applying a global correction to the entire image. *Id.*, col. 2, lines 57–63. Consequently, the invention of the '381 patent transforms a digital image on a pixel-by-pixel basis so that contrast is altered in localized areas of an image that need correction in a manner consistent with the localized area (i.e., the dark areas are made lighter and the light areas are made darker). *Id.*, Abstract, col. 2, lines 57-62. Prior to issuance, Drs. Song and Levinstone assigned all rights, title, and interest in and to the '381 patent to Polaroid. Ex. A, Compl. ¶ 8. Polaroid now owns the '381 patent, which issued on May 9, 1989. *Id.* ¶ 7.

Figure 1 of the Patent is an illustrated embodiment of the patented system for transforming images:

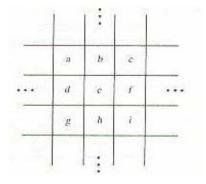
-

To avoid filing multiple copies of the same document in support of Polaroid's summary judgment motions, documents common to more than one summary judgment motion are contained in a Joint Appendix and will be cited as "J.A. Ex. \_\_\_." Documents related only to the instant motion are contained in a separate Appendix and will be cited as "Ex. ."



In Figure 1,  $Y_{INPUT}$  represents the electronic information signals associated with the pixels that define the digital image being transformed, which enter the patented system one after the other. J.A. Ex. A, '381 Pat., col. 3, lines 1–6. Information associated with the electronic information signals  $Y_{INPUT}$  are sent to both the averager 12 and the  $Y_{OUT}$  equation 16.

The first step in the transformation process is to define a window, local neighborhood, or plurality of pixels that includes the pixel to be transformed. *Id.*, col. 3, lines 59–61. Although not required to be centered around the pixel to be transformed, *see id.*, col. 3, lines 63–67, this window is typically a group of pixels where the pixel to be transformed is located in the center of the window. Ex. 4 to Agouris Op. Rpt. at pp. 33–34 (J.A. Ex. B). For example, the figure below shows a sample 3x3 neighborhood of pixels (a-i) surrounding pixel "e," which is the pixel to be transformed:



J.A. Ex. B, Agouris Op. Rpt. at p. 11. In this example, the window of pixels moves every time a new pixel is being processed so that the pixel to be transformed is always at the center of the window. *Id*.

The intensity values associated with the group of pixels are then averaged by the averager 12 as shown in Figure 1 above. J.A. Ex. A, '381 Pat., col. 3, lines 59–61. The '381 patent teaches that the averaging step is performed by a low pass filter or block averager. *Id.*, col. 3, line 61–col. 4, line 25. In either case, the pixel values contained within the window are used to calculate one average for that window and the value becomes associated with the pixel to be transformed. *Id.*, col. 3, line 59–col. 4, line 16.

The next step in the process is to use the average value obtained for the window and associated with the pixel to be transformed in the previous step to calculate gamma ( $\gamma$ ) in accordance with the algorithm:

$$\gamma = (1+C)^{(Av/M-1)}$$

*See id.*, col. 4, lines 26–55. In the algorithm: (1) C is a constant that is chosen based on the desired amount of correction, *id.*, col. 4, lines 51–55, col. 6, lines 30–42 (disclosing a preferred value of 1); (2) A<sub>v</sub> is the average value calculated by the averager **12**, *id.*, col.4, lines 26–30; and (3) M is a number within the dynamic range of the image to be transformed, which is 0–255 for an 8-bit image. *See id.*, col. 4, lines 34–50 (disclosing a preferred value of 128).

The final step is to use  $\gamma$  to select one of the many transfer functions that could be imposed in the transfer function imposing circuit **16** to determine the output pixel value (Y<sub>OUT</sub>) as follows:

$$Y_{OUT} = Y_{MAX} (Y_{IN}/Y_{MAX})^{\gamma}$$

See id., col. 4, lines 56–65. In this algorithm: (1)  $Y_{MAX}$  is the maximum value of the dynamic range used by the image (255 for an 8-bit image), id., col. 4, lines 66–68; (2)  $Y_{IN}$  is an intensity

value associated with the pixel to be transformed in the original image contained within the  $Y_{INPUT}$  electronic information signal, *see id.*, col. 4, lines 56–65; and (3)  $Y_{OUT}$  is the transformed intensity value for the input pixel. *Id.*, col. 4, line 68–col. 5, line 15.

By successively processing each pixel in an image in the manner described above, the invention disclosed in the '381 patent transforms the input image. *Id.*, col. 2, lines 54–68, col. 4, line 68–col. 5, line 15.

## B. Polaroid's Products And Technologies.

Polaroid has not made, offered for sale, or sold a product using or incorporating the '381 patent. Ex. C, J. Bullitt Decl. ¶¶ 6–18. Polaroid's local and adaptive gamma technologies are two implementations of the '381 patent's algorithm. *See* Ex. C, J. Bullitt Decl. ¶¶ 9–10; Ex. 58 to Agouris Op. Rpt. (J.A. Ex. B), J. Bullitt Dep. Tr. at p. 24, lines 2–15; J.A. Ex. B, Agouris Op. Rpt. at 97. The basic algorithm for the local gamma code is on BB15501 and BB27320. Exs. 65 and 67 to Agouris Op. Rpt. (J.A. Ex. B). The basic algorithm for the adaptive gamma code is on BB15686-87. Ex. 66 to Agouris Op. Rpt. (J.A. Ex. B). According to Dr. Julian Bullitt, a former Polaroid employee and Polaroid's Rule 30(b)(6) witness, neither local gamma nor adaptive gamma were ever used or incorporated in any Polaroid product, but were solely used for internal research and development. *See e.g.*, Ex. 58 to Agouris Op. Rpt. (J.A. Ex. B), J. Bullitt Dep. Tr. at p. 22, line 13–p. 23, line 21; p. 40, line 23–p. 41, line 21; p. 61, lines 5–11; p. 61, line 21–p. 63, line 10; p. 130, line 22–p. 131, line 10. Dr. Bullitt's declaration provides further context for these statements. Ex. C, J. Bullitt Decl. ¶¶ 9–10.

HP never identified any Polaroid products in its answers to Polaroid's interrogatory on marking. *See* Section II.B. below. It did, however, identify products via correspondence that, according to HP, should have been marked: Before and After; Polacolor Insight 3.0, 4.5, and 5.0; SimplePCIp; Sprintscan 35, 35LE, 35ES, and 35 Plus; other IQA and eIQA products; products

using the TWAIN driver; and products using Photoshop plug-ins. Ex. D, 2/15/08 Giust Ltr. to Higer at p. 1. None of these products use or incorporate adaptive gamma or local gamma (Polaroid's internally utilized embodiments of the '381 patent) or the '381 patent itself. See e.g., Ex. C, J. Bullitt Decl. ¶ 11–18; Ex. 58 to Agouris Op. Rpt. (J.A. Ex. B), J. Bullitt Dep. Tr. at p. 22, line 13-p. 23, line 21; p. 40, line 23-p. 41, line 21; p. 61, lines 5-11; p. 61, line 21-p. 63, line 10; p. 130, line 22-p. 131, line 10. And, these products do not embody the claims of the '381 patent. See Section III below; J.A. Ex. B, Agouris Op. Rpt. at 90-98.

Certain Polaroid technologies known as dodge and burn and adaptive sharpening are incorporated in the Polaroid products identified by HP. Dodge and burn technology embodies the Wober algorithm as described in U.S. Patent No. 5,235,434. J.A. Ex. B, Agouris Op. Rpt. at

See

Ex. E, J. Bullitt Dep. Tr. at p. 16, line 25–p. 17, line 5; p. 44, lines 3–20. Adaptive sharpening technology embodies the Song algorithm described in U.S. Patent No. 4,783,840. J.A. Ex. B. Agouris Op. Rpt. at 95.

Ex. E, J. Bullitt

Dep. Tr. at p. 29, lines 12–17; p. 38, line 11–p. 39, line 3; p. 53, line 20–p. 54, line 17.

*Id.*; Ex. C, J. Bullitt Decl. ¶ 12. HP has never

identified these technologies in an interrogatory answer to Polaroid as potential embodiments of the '381 patent. Nonetheless, it is clear that they do not embody the claims of the '381 patent. See Section III below; J.A. Ex. B, Agouris Op. Rpt. at 90-98.

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## C. Polaroid's Sole Licensee To The '381 Patent.

Polaroid granted only one license to the '381 patent, Ex.

F, Intellectual Property License Agreement at ¶ 2(c)(3) and Ex. A2; Ex. C, J. Bullitt Decl. ¶ 25; Ex. G, B. Kullberg Dep. Tr. at p. 381, lines 9–16.

Ex. H, Asset Purchase Agreement at ¶ 2.4 (a).

Ex. G, B. Kullberg Dep. Tr. at p. 435, line 6–p. 436, line 7.

Ex. Ex. G, B. Kullberg Dep. Tr. at p. 152, lines 3–4.

Ex. Ex. C, J. Bullitt Dep. Tr. at p. 152, lines 3–4.

Ex. C, J. Bullitt Decl. ¶ 26; Ex. E, J. Bullitt Dep. Tr. at p. 152, lines 5–14.

## **ARGUMENT**

Summary judgment under 35 U.S.C. § 287 (a) should be granted if the pleadings, depositions, answers to interrogatories, and admissions on file, together with affidavits, if any, show that there is no genuine issue as to any material fact and that Polaroid should be granted judgment as a matter of law. Fed. R. Civ. P. 56(c); see also Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 247–48 (1986) (the mere existence of some alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no genuine issue of material fact). A primary purpose of summary judgment is to "isolate and dispose of factually unsupported claims or defenses." Celotex Corp. v. Catrett, 477 U.S. 317, 323–24 (1986). There is no issue for trial unless there is sufficient evidence favoring the non-moving party for a jury to return a verdict for that party. Anderson, 477 U.S. at 249–50. If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted. Id. Thus, HP must do more than merely raise some doubt as to the existence of a fact; HP must provide evidence which would be sufficient to require submission to the jury of the dispute over the fact. Avia Group Intern., Inc. v. L.A. Gear California, Inc., 853 F.2d 1557, 1560 (Fed. Cir. 1988).

Summary judgment is appropriate here because Polaroid has complied with 35 U.S.C. § 287 (a). Neither Polaroid nor its sole licensee under the '381 patent has made, offered for sale, or sold products embodying the invention claimed in the '381 patent. Therefore, the issuance of the '381 patent is sufficient notice under the marking statute, and Polaroid should be granted the full damages period.

## I. PATENT ISSUANCE CONSTITUTES CONSTRUCTIVE NOTICE WHERE NO PATENTED ARTICLES ARE MADE, OFFERED FOR SALE, OR SOLD.

Under the marking statute, a party is "entitled to damages from the time when it either began marking its products in compliance with section 287 (a) or when it actually notified [the

infringer] of its infringement, whichever is earlier." Am. Med. Sys., Inc. v. Med. Eng'g Corp., 6 F.3d 1523, 1537 (Fed. Cir. 1993). Section 287 (a) provides:

Patentees, and persons making, offering for sale, or selling within the United States any patented article for or under them, or importing any patented article into the United States, may give notice to the public that the same is patented, either by fixing thereon the word "patent" or the abbreviation "pat.", together with the number of the patent, or when, from the character of the article, this can not be done, by fixing to it, or to the package wherein one or more of them is contained, a label containing a like notice. In the event of failure so to mark, no damages shall be recovered by the patentee in any action for infringement, except on proof that the infringer was notified of the infringement and continued to infringe thereafter, in which event damages may be recovered only for infringement occurring after such notice. Filing of an action for infringement shall constitute such notice.

The marking statute applies to both patentees and licensees. *Id.* 

A patentee is only required to comply with the marking statute if it makes, offers for sale, or sells within the United States a patented article. 35 U.S.C. § 287 (a) (emphasis added). Where a patentee did not engage in any of these activities, the marking statute is not implicated. Wine Ry. Appliance Co., 297 U.S. at 393.3 In Wine Ry. Appliance Co., the Supreme Court said:

Two kinds of notice are specified—one to the public by a visible mark, another by actual advice to the infringer. The second becomes necessary only when the first has not been given; and the first can only be given in connection with some fabricated article. *Penalty for failure implies opportunity to perform.* 

Id. at 395 (emphasis added). Numerous cases have recognized this principle. See, e.g., In re: Elonex Phase II Power Mgmt. Litig., No. 01-082, 2002 WL 242363, at \*3 (D. Del. Feb. 20, 2003) ("The court concludes that, if the patentee...neither sells, nor manufactures, the patented product, Section 287 (a)'s notice provisions do not apply."); Tulip Computers Int'l B.V. v. Dell Computer Corp., Civil Action No. 00-981-KAJ2003, WL 1606081, at \*15 (D. Del. Feb. 4, 2003) ("Since § 287 (a) is not triggered when the patentee is not producing patented articles, the

Although Wine Railway interpreted a predecessor to Section 287 (a), the Federal Circuit has applied the logic of Wine Railway to the current statute. See, e.g., Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1219-20 (Fed. Cir. 2002).

patentee can recover damages for infringement during this period of time..."); Workas v. Dresser Indus., Inc., 978 F. Supp. 839 (N.D. Ind. 1997) (finding that the marking requirements of Section 287 (a) are not applicable to situations where the patented item is not made or sold by the patentee); Loral Fairchild Corp. v. Victor Co. of Japan, Ltd., 906 F. Supp. 813, 816 (E.D. N.Y. 1995) (Rader, J.) ("[Section 287] does not apply to a patent owner who neither sells nor authorizes others to sell articles covered by the patent."); Medical Graphics Corp. v. Sensormedics Corp., Civ. No. 3-94-525, 1995 WL 523633, at \*3 (D. Minn. June 5, 1995) (denying motion for partial summary judgment on damages on the grounds, in part, that the patentee did not produce any article for which there was a duty to mark). Where there are no patented articles, the "issuance of a patent and recordation in the Patent Office constitute notice to the world of its existence." Wine Ry. Appliance Co., 297 U.S. at 393; see also Tulip Computers Int'l B.V., WL 1606081, at \*13.

Whether a party has produced a patented article is a question of whether the article "embodies" a patent, an analogous inquiry to whether an article infringes a patent. *Broadcom Corp. v. Agere Systems, Inc.*, No. Civ.A. 04-2416, 2004 WL 2009320, at \*3 (E.D. Pa. Sept. 8, 2004) (citing *Laitram Corp. v. Hewlett-Packard Co., Inc.*, 806 F. Supp. 1294, 1296 (E.D. La. 1992)); *see also Unova Inc. v. Hewlett-Packard*, No. CV 02-3772, 2006 WL 5434534, at \*1 (C.D. Cal. Feb. 16, 2006) (same); *Clancy Sys. Int'l, Inc. v. Symbol Techs., Inc.*, 960 F. Supp. 1170, 1173 (D. Colo. 1997) (same). The embodiment determination is a two-step analysis. Initially, the claims of the patent must be construed for their scope and meaning. *Broadcom Corp.*, 2004 WL 2009320, at \*3. Then, the properly construed claim must be compared to the alleged patented article. *Id.* If one limitation or element is missing, there is no embodiment of that claim. *Id.* 

It is undisputed that the '381 patent issued on May 9, 1989. J.A. Ex. A, '381 Pat., cover page. Neither Polaroid nor its only licensee has made, offered for sale, or sold any patented article under the '381 patent. *See, e.g.*, Ex. L, Polaroid's First Supplemental Resp. to HP's First Set of Interrogs. at No. 18. Polaroid has complied with the marking statute, and HP has had notice of the '381 patent since May 9, 1989.

Courts have held that the party claiming failure to mark must prove whether an allegedly unmarked product is a patented article. *See, e.g., Laitram Corp.*, 806 F.Supp. 1296; *Unova Inc.*, 2006 WL 5434534, at \*1. For example, in *Laitram Corp.*, the court denied the defendant's motion for partial summary judgment that the plaintiff had failed to comply with 35 U.S.C. § 287. 806 F. Supp. at 1296. For the defendant—*HP*—to prevail, the *Laitram* court held that HP would have to prove that certain products were "patented articles." *Id.* 

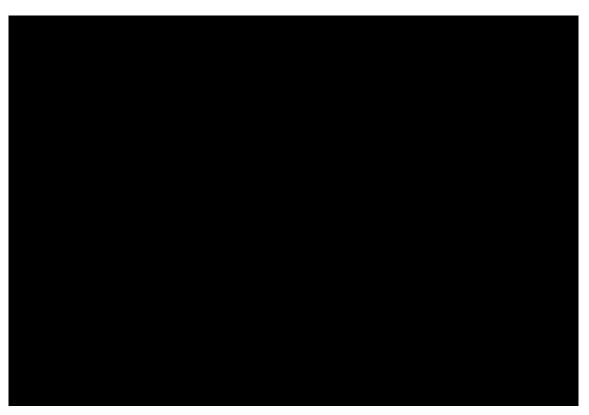
A second court similarly denied the same defendant—*HP*—summary judgment on marking. *Unova Inc.*, 2006 WL 5434534, at \*1. As the defendant, "HP first has the burden to show that [plaintiff's product] is a patented article, and the burden then shifts to [plaintiff] to show that [the product] was marked." *Id.* A third court similarly denied summary judgment to a defendant in part because the defendant failed to show that allegedly unmarked products were patented articles. *Church & Dwight Co., Inc. v. Abbott Labs.*, Civil Action No. 05-2142, 2007 WL 1959272, at \*5-6 (D. N.J. July 5, 2007).

HP has not come close to satisfying its marking burden. To the contrary, as described below, HP has never properly identified any products it believes Polaroid allegedly should have marked in its interrogatory responses. For this reason alone, summary judgment on marking should be granted to Polaroid.

## II. HP'S INTERROGATORY RESPONSES NEVER IDENTIFIED A POLAROID PRODUCT THAT WAS REQUIRED TO BE MARKED.

HP has never identified a Polaroid product that required marking in its interrogatory responses, and, for this reason alone, summary judgment in favor of Polaroid regarding its compliance with the marking statute is appropriate.

In its Answer, HP asserted an affirmative defense, vaguely stating without support that Polaroid's "claims for damages are limited by 35 U.S.C. § 287 (a)." Ex. B, Answer and Counterclaims ¶ 23. Nearly a year ago—on May 22, 2007—Polaroid specifically served an interrogatory to HP regarding this marking defense. Ex. I, Polaroid's First Set of Interrogs. No. 9 ("State all bases for HP's contention that 35 U.S.C. § 287 (a) limits Polaroid's claim for damages."). On June 21, 2007, HP responded with non-substantative, boilerplate language, the totality of which is as follows:



Ex. J, HP's Resp. to Polaroid's First Set of Interrogs. (Nos. 1-20) at No. 9.

On October 15, 2007, HP non-substantively "supplemented" this interrogatory response:



Ex. M, HP's Fourth Supplemental Resp. to Polaroid's First Set of Interrogs. (Nos. 9, 11–13) at No. 9. HP again did not identify a single Polaroid product that it believed should have been marked in order for Polaroid to comply with the marking statute.

Fact discovery in this case closed on February 1, although it extended until February 8, 2008 for limited outstanding issues. Although Polaroid even provided a Rule 30(b)(6) witness regarding Polaroid products, HP did not again supplement its response to this Interrogatory.<sup>4</sup>

Polaroid should be granted summary judgment on marking because HP has not properly identified any Polaroid products that: (1) were patented articles; (2) were made, offered for sale, or sold in the United States; and (3) were not marked.

### III. POLAROID HAD NO DUTY TO MARK BECAUSE IT NEVER MADE, OFFERED FOR SALE, OR SOLD A PRODUCT EMBODYING THE CLAIMS OF THE '381 PATENT.

Even assuming that HP had properly identified Polaroid products that it contends Polaroid should have marked—which HP did not—summary judgment is still appropriate,

In February 15, 2008 correspondence to Polaroid's counsel—not an interrogatory response counsel for HP stated that "[a]t least the following Polaroid products should have been marked, as required by 35 U.S.C. § 287, according to Polaroid's application of asserted claim constructions for the '381 patent: Before and After; Polacolor Insight 3.0, 4.5, and 5.0; SimplePCIp; Sprintscan 35, 35LE, 35ES, and 35 Plus; other IOA and eIOA products; products using the TWAIN drivers; and products using Photoshop plug-ins." Ex. D, 2/15/08 Giust Ltr. to Higer at 1. This late, unverified, and unsupported correspondence is insufficient to satisfy HP's discovery obligations.

because Polaroid has never made, offered for sale, or sold any product embodying the claims of the '381 Patent.

#### Certain Polaroid Technologies Were Never Used Or Incorporated In A Α. Polaroid Product.

The marking requirements of Section 287 are only triggered if a patentee has made, offered for sale, or sold a patented article. Adaptive gamma, local gamma, and eIQA were never used or incorporated in any Polaroid products.<sup>5</sup> See e.g., Ex. C, J. Bullitt Decl. ¶¶ 9–10, 12; Ex. 58 to Agouris Op. Rpt. (J.A. Ex. B), J. Bullitt Dep. Tr. at p. 22, line 13-p. 23, line 21; p. 40, line 23-p. 41, line 21; p. 61, lines 5-11; p. 61, line 21-p. 63, line 10; p. 130, line 22-p. 131, line 10. Under the express terms of the marking statute, Polaroid thus had no duty to mark relating to these technologies, and summary judgment is appropriate.. 35 U.S.C. § 287 (a).

#### В. Polaroid Never Made, Offered For Sale, Or Sold A Product Embodying Claims 1–5 Of The '381 Patent.

HP has provided no evidence that any Polaroid product embodied Claims 1–5 of the '381 patent. Dr. Dan Schonfeld, the HP expert who opined regarding alleged patented articles, did not provide an opinion as to whether Polaroid products embody Claims 1-5. Ex. N, D. Schonfeld Dep. Tr. at p. 12, lines 1-6; p. 13, line 20-p. 14, line 10. For this reason alone, Polaroid should be granted summary judgment that it has not made, offered for sale, or sold any patented articles embodying claims 1-5.

Dr. Schonfeld's silence is not surprising in light of the reality that none of Polaroid's products—including those that were actually commercialized—embody Claims 1–5 of the '381 patent. As stated above, the embodiment analysis is akin to an infringement analysis. See, e.g.,

Indeed, Polaroid's Before and After software, Polacolor Insight 3.0 and 5.0 software,

cannot form the basis of any "failure to mark" contention by HP. See Ex. C, J. Bullitt Decl. ¶ 19.

14

SimplePCIp, Sprintscan 35, 35LE, 35ES and 35 Plus, products using the TWAIN driver, and products using Photoshop plug-ins were not sold at all after January 1, 2000 and thus, obviously

Broadcom Corp., 2004 WL 2009320, at \*3. To prove infringement, one "must show the presence of every limitation or its substantial equivalent in the accused device." Gart, 254 F.3d at 1339. The same is true for embodiment. If every limitation or its substantial equivalent cannot be found in a product, it is not an embodiment of the patent, otherwise known as a patented article. Id.

Claim 1 of the '381 patent is an independent claim upon which Claims 2–5 depend. J.A. Ex. A, '381 Pat., col. 7, line 61–col. 8, line 64. The claim constructions for Claims 1–3 can be found in the Joint Claim Construction Statement—Corrected. J.A. Ex. D, Joint Claim Construction Statement—Corrected; Ex. O, HP's Notice of Agreement to Polaroid's Proposed Construction of "Averaging" and "Average" ("Notice of Agreement").6 Neither Claim 4 nor Claim 5 has been submitted for construction as neither one was asserted by Polaroid. Dependent Claims 2–5 will require the same elements as Claim 1 because a dependent claim incorporates by reference all the limitations of the claim or claims to which it refers. 35 U.S.C. § 112. As a result, if an element required for Claim 1 is missing from a Polaroid product, it will not embody Claim 1 or Claims 2–5.

The parties agree that the structure for Claim 1, Element 2 contains at minimum: "(1) an exponential function; and (2) at least the use of the average luminance of the original image in the calculation of the exponent." J.A. Ex. B, Agouris Op. Rpt. at 92. Thus, if a Polaroid technology does not contain an exponential function or use the average luminance of the original image to calculate the exponent, it will not embody all of the elements of Claims 1–5. *Id*.

Claims 1–5 are not embodied by any Polaroid product because at least Element 2 of Claim 1 is missing from the technologies and products identified by HP. *See, e.g., Broadcom* 

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HP belatedly filed its Notice of Agreement on May 15, 2008. Polaroid has done its best to adjust HP's claim constructions accordingly.

Corp., 2004 WL 2009320, at \*3; Gart, 254 F.3d at 1339. Neither Polaroid's dodge and burn source code nor its adaptive sharpening source code contains an exponential function that makes use of the average luminance of the original image in its calculation. See J.A. Ex. B, Agouris Op. Rpt. at 94–95. Polaroid's products containing dodge and burn and adaptive sharpening technologies

therefore lack a necessary element of Claims 1–5 and are not patented articles under Section 287.

## C. Polaroid Never Made, Offered For Sale, Or Sold A Product Embodying Claim 6 Of The '381 Patent.

No Polaroid product embodies Claim 6 of the '381 patent. Indeed, *HP's expert did not even opine regarding the application of Claim 6 to Polaroid products*. Ex. N, D. Schonfeld Dep. Tr. at p. 12, lines 1–6; p. 14, lines 11–12. Thus, Polaroid at least should be granted summary judgment regarding Claim 6.

The elements of Claim 6 are outlined in the '381 patent. J.A. Ex. A, '381 Pat., col. 8, line 65–col. 9, line 42. Because it has not been asserted, this claim was not submitted for construction. Given its express terms, Claim 6 requires logarithm and antilogarithm determining means. *See id.* If a Polaroid product does not contain a logarithm determining means, it will not embody all of the elements of Claim 6. J.A. Ex. B, Agouris Op. Rpt. at 93. Likewise, if a Polaroid product does not contain an antilogarithm determining means, it will not embody all of the elements of Claim 6. *Id.* 

No Polaroid product embodies Claim 6 of the '381 patent because at least one limitation of Claim 6 is missing from the technologies and products identified by HP. *See, e.g., Broadcom Corp.*, 2004 WL 2009320, at \*3; *Gart*, 254 F.3d at 1339. Polaroid's dodge and burn and adaptive sharpening technologies do not contain any logarithms or antilogarithms, or means for

calculating logarithms or antilogarithms, which are required for Claim 6. See J.A. Ex. B, Agouris Op. Rpt. at 95. Thus, Claim 6 of the '381 patent is not embodied by Polaroid's

and there are no patented articles under that claim.

## D. Polaroid Never Made, Offered For Sale, Or Sold A Product Embodying Claim 7 Of The '381 Patent.

HP has not established that dodge and burn and adaptive sharpening embody Claim 7 of the '381 patent. Because at least two elements of Claim 7 are missing from both dodge and burn and adaptive sharpening source code—and the products that contain them—they do not embody Claim 7 and are not patented articles that require marking. *See, e.g., Broadcom Corp.*, 2004 WL 2009320, at \*3; *Gart*, 254 F.3d at 1339.

### 1. Claim 7.

Claim 7 is a method claim and contains a preamble and three separate claim elements.

Claim 7 reads as follows:

7. A method for continuously enhancing electronic image data received in a continuous stream of electronic information signals each signal having a value within a determinate dynamic range of values and corresponding to one of a plurality of succeeding pixels which collectively define an image, said method comprising the steps of:

averaging the electronic information signals corresponding to selected pluralities of pixels and providing an average electronic information signal for each said plurality of pixels;

selecting one of a plurality of different transfer functions for the electronic information signal for each of the plurality of succeeding pixels in a manner whereby each transfer function is selected as a function of the electronic information signal for one pixel and the average electronic information signal for the select plurality of pixels containing said one pixel; and

transforming the electronic information signal corresponding to each pixel by the transfer function selected for that pixel wherein said transfer function is selected further as a function of the ratio of the value of the average electronic information signal to a select proportionate value of the dynamic range of the electronic information signals such that the ratio increases in correspondence with the increase in the value of the average electronic information signal.

J.A. Ex. A, '381 Pat., col. 9, line 42–col. 10, line 2.

#### 2. Claim 7, preamble.

#### Polaroid's proposed claim construction. a.

If the Court determines that the preamble is a limitation, Polaroid has construed the terms of the preamble such that the preamble under Polaroid's proposed construction reads as follows:

A method for [successively transforming] [electronic data received in a successive series of signals providing pixel information, such as color, luminance, or chrominance values], [each signal being associated with a value that lies within a range of possible values bounded by definite limits] and corresponding to one of a plurality of succeeding pixels which collectively define an image, said method comprising:

J.A. Ex. D, Joint Claim Construction Statement—Corrected.

#### b. HP's proposed claim construction.

If the Court determines that the preamble is a limitation, HP has construed the terms of the preamble such that the preamble under HP's proposed construction reads as follows:

- 7. A method for [successively transforming] [an uninterrupted stream of received luminance image data [pixels] defining an original image to be recorded], [each received pixel has an associated luminance value that lies within a predetermined group of luminance values and corresponding to one of a plurality of succeeding pixels which collectively define an image, said method comprising the steps of:
- J.A. Ex. D, Joint Claim Construction Statement—Corrected.

#### 3. Claim 7, Element 1.

#### Polaroid's proposed claim construction. a.

Polaroid has construed the terms of Claim 7, Element 1 such that the element under Polaroid's proposed construction reads as follows:

[calculating an intermediate value for] the [signals providing pixel information, such as color, luminance, or chrominance values] corresponding to selected pluralities of pixels and providing a[] [signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value] for each said plurality of pixels;

J.A. Ex. D, Joint Claim Construction Statement—Corrected.

#### b. HP's proposed claim construction.

HP has construed the terms of Claim 7, Element 1 such that the element under HP's proposed construction reads as follows:

[calculating an intermediate value for] the [signals providing luminance pixel information] corresponding to selected pluralities of pixels and providing an [average of the signal providing luminance pixel information] for each said plurality of pixels;

J.A. Ex. D, Joint Claim Construction Statement—Corrected; Ex. O, HP's Notice of Agreement.

#### 4. Claim 7, Element 2.

#### Polaroid's proposed claim construction. a.

Polaroid has construed the terms of Claim 7, Element 2 such that the element under Polaroid's proposed construction reads as follows:

[S]electing one of a plurality of different [functions that transform an image] for the [signal providing pixel information, such as color, luminance, or chrominance values for each of the plurality of succeeding pixels in a manner whereby each [function that transforms an input signal] is selected as a function of the [signal providing pixel information, such as color, luminance, or chrominance values or one pixel and the [signal providing pixel information, such as color, luminance, or chrominance values of calculated intermediate value for the select plurality of pixels containing said one pixel;

J.A. Ex. D, Joint Claim Construction Statement—Corrected. Under Polaroid's construction, this element requires, at minimum, the use of the average luminance of the original image to select the transfer function. *Id.* 

#### HP's proposed claim construction. b.

HP has construed the terms of Claim 7, Element 2 such that the element under HP's proposed construction reads as follows:

[each input pixel has an associated function that transforms an input signal out of different functions that transform an input signal, and the function that transforms an input signal is selected based on the input pixel value, and the calculated intermediate value that was formed using the input pixel value, where each input pixel is part of only one arithmetic mean];

J.A. Ex. D, Joint Claim Construction Statement—Corrected; Ex. O, HP's Notice of Agreement. Although HP's construction differs from Polaroid's, HP's construction of Element 3 of Claim 7 necessitates the use of the average luminance of the original image to select the transfer function. *Id.* 

## 5. Claim 7, Element 3.

## a. Polaroid's proposed claim construction.

Polaroid has construed the terms of Claim 7, Element 3 such that the element under Polaroid's proposed construction reads as follows:

[T]ransforming the [signal providing pixel information, such as a color, luminance, or chrominance value] corresponding to each pixel by the [function that transforms an input signal] selected for that pixel wherein said [function that transforms an input signal] is selected further as a function of the ratio of the value of the [signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value] to a [value within the range of possible values] such that the ratio increases in correspondence with the increase in the value of the [signal providing pixel information, such as a color, luminance, or chrominance value of calculated intermediate value.]

## J.A. Ex. D, Joint Claim Construction Statement—Corrected.

### b. HP's proposed claim construction.

HP has construed the terms of Claim 7, Element 3 such that the element under HP's proposed construction reads as follows:

[each input pixel value that has been part of the averaging step is altered based on the corresponding average of the signal providing luminance pixel information to which it is associated and based on the result of dividing a first existing data value representing the average of the signal providing luminance pixel information by a second existing data value representing any value within the determinate dynamic range of values, selected depending on where the least image enhancement is desired.]

J.A. Ex. D, Joint Claim Construction Statement—Corrected.

## 6. Polaroid's dodge and burn technology does not embody Elements 1–3 of Claim 7.

Elements 1–3 of Claim 7 are not embodied by Polaroid's dodge and burn technology. Claim 7, Element 1 requires that the code generate a single intermediate value for each plurality, or neighborhood of pixels. *See* Section III.D.3. Rather than generating a single average, dodge and burn generates, at minimum, an average low and an average high. *See* Ex. P, P. Agouris Dep. Tr. at p. 222, lines 8–17; Ex. N, D. Schonfeld Dep. Tr. at p. 106, lines 5–9. Code that generates two intermediate values for one plurality does not embody this element of Claim 7. *See* Ex. P, P. Agouris Dep. Tr. at p. 222, line 25–p. 223, line 6; p. 223, lines 19–25. Thus, because dodge and burn generates at least two values for the plurality rather than one, it cannot embody Element 1 of Claim 7. *Id.* at p. 236, lines 14–18.

Additionally, under the claim constructions of both parties, Element 2 of Claim 7 requires the use of the average luminance of the original image to select the transfer function. *See* Section III.D.4. Dodge and burn source code does not average the original luminance value. Instead, the luminance value is changed, and the average is applied to that changed information. Dr. Schonfeld—*HP's expert*—acknowledged this fact during his deposition:



Ex. N, D. Schonfeld Dep. Tr. at p. 207, lines 10–21 (emphasis added); see also p. 79, line 22–p. 81, line 6; p. 111, line 19–24; p. 116, lines 15–17. Polaroid's technical expert Dr. Agouris stated that the "function that makes use of the average luminance in its calculation" is missing from dodge and burn source code and needed for Claim 7. *See* Ex. P, P. Agouris Dep. Tr. at p. 213, line 23–p. 214, line 14; p. 218, line 3–p. 219, line 10. Accordingly, dodge and burn cannot embody Claim 7 of the '381 patent.

As for Element 3 of Claim 7, dodge and burn source code does not have a transfer function that is "selected further as a function of the ratio of the value of the average electronic information signal to a select proportionate value of the dynamic range of the electronic information signals." J.A. Ex. A, '381 patent, col. 9, lines 64–67. Dodge and burn source code lacks the specific ratio required by this element. Ex. P, P. Agouris Dep. Tr. at p. 218, lines 3–13; p. 236, lines 14–18. Claim 7, Element 3 of the '381 patent is thus not embodied by dodge and burn technology.

## 7. Polaroid's adaptive sharpening technology does not embody Elements 2 and 3 of Claim 7.

Adaptive sharpening is not an embodiment of Elements 2 and 3 of Claim 7. Element 2 of Claim 7 is not embodied by Polaroid's adaptive sharpening source code given the fact that it does not use the average luminance of the original image to select the transfer function. *See* Section III.D.3. The most common way to reference the dynamic range for an 8-bit image is 0 to 255. Ex. N, D. Schonfeld Dep. Tr. at p. 71, lines 5–9.

Any calculations are performed on the expanded dynamic range. For this reason, Polaroid's technical expert Dr. Agouris stated that adaptive sharpening does not use the average luminance in its calculation. *See* Ex. P, P. Agouris

Dep. Tr. at p. 217, lines 6–10, line 14; p. 218, line 24–p. 219, line 3; p. 228, lines 6–14; p. 238, lines 6–13. As a result, adaptive sharpening does not embody Claim 7.

Adaptive sharpening does not embody Element 3 of Claim 7 either because it does not have a transfer function that is "selected further as a function of the ratio of the value of the average electronic information signal to a select proportionate value of the dynamic range of the electronic information signals." J.A. Ex. A, '381 patent, col. 9, lines 64–67. This element requires a specific ratio that adaptive sharpening lacks. Ex. P, P. Agouris Dep. Tr. at p. 218, lines 3–13; p. 237, lines 7–20. Due to this missing and necessary element, Claim 7, Element 3 of the '381 patent is not embodied by adaptive sharpening source code.

## 8. Conclusion regarding Claim 7.

At least one limitation of Claim 7 is lacking—and as shown above, multiple limitations are actually missing—from the technologies and products identified by HP. *See, e.g., Broadcom Corp.*, 2004 WL 2009320, at \*3; *Gart*, 254 F.3d at 1339. Claim 7 is thus not embodied by any Polaroid product or technology. Polaroid had no duty to mark any products under Claim 7 as it had no patented articles under this claim to mark.

## E. Polaroid Never Made, Offered For Sale, Or Sold A Product Embodying Claims 8–13 Of The '381 Patent.

HP has provided no evidence that any Polaroid product embodies Claims 8–13 of the '381 patent. No expert testimony was provided by HP on the issue of whether Polaroid products embody these claims. Ex. N, D. Schonfeld Dep. Tr. at p. 12, lines 1–6; p. 14, line 13–p. 15, line 3. At minimum, summary judgment should be granted to Polaroid to the extent it has not made, offered for sale, or sold any patented articles embodying Claims 8–13.

Claims 8–11 can be found in the '381 patent. J.A. Ex. A, '381 Pat., col. 10, lines 3–39. Claim 7 is an independent claim upon which Claims 8–11 are dependent. *Id.* The claim constructions for Claims 8 and 9 are in the Joint Claim Construction Statement—Corrected. J.A.

Ex. D, Joint Claim Construction Statement—Corrected; Ex. O, HP's Notice of Agreement. No constructions were submitted by the parties for Claims 10 and 11 as they are not at issue. Because Claims 8–11 are dependent on Claim 7, they incorporate the same elements as Claim 7. 35 U.S.C. § 112. Therefore, for the same reasons described above in Section III.D. regarding Claim 7, Polaroid products and technologies do not embody Claims 8–11 of the Polaroid patent.

The elements of Claim 12 are outlined in the '381 patent. J.A. Ex. A, '381 Pat., col. 10, line 40–col. 12, line 5. Neither party has submitted a construction of this claim because Polaroid has not asserted it. On its face, Claim 12 requires logarithm and antilogarithm determining means. *See id.* If a Polaroid product does not contain a logarithm or an antilogarithm determining means, it will not embody Claim 12. Claim 13 is dependent on Claim 12 and incorporates all the elements of Claim 12. *Id.*, col. 12, lines 6–10; 35 U.S.C. § 112. Because Polaroid's dodge and burn and adaptive sharpening technologies do not contain any logarithms or antilogarithms, or means for calculating logarithms or antilogarithms, they, as well as any products containing these technologies, lack elements from Claims 12 and 13. *See* J.A. Ex. B, Agouris Op. Rpt. at 95. As a result, no Polaroid product or technology is an embodiment of Claims 12 and 13.

For the reasons stated above, no Polaroid product embodies Claims 8–13 of the '381 patent given that at least one limitation of those claims is missing from the technologies and products identified by HP. *See, e.g., Broadcom Corp.*, 2004 WL 2009320, at \*3; *Gart*, 254 F.3d at 1339. Thus, no patented articles arise under these claims.

# IV. POLAROID'S LICENSEE HAD NO DUTY TO MARK BECAUSE IT NEVER MADE, OFFERED FOR SALE, OR SOLD A PRODUCT EMBODYING THE CLAIMS OF THE '381 PATENT.

HP has never asserted that the only licensee to the '381 patent, failed to comply with the marking statute. It is undisputed that has never made, offered for sale, or sold a

product using or incorporating the '381 patent. Ex. C, J. Bullitt Decl. ¶ 26.

Ex. E, J. Bullitt Dep. Tr. at p. 152,

lines 3–4. thus had no duty to mark and has therefore complied with 35 U.S.C. § 287 (a). Wine Ry. Appliance Co., 297 U.S. at 393.

## **CONCLUSION**

For the foregoing reasons, Polaroid requests that the Court enter partial summary judgment that Polaroid's damages claims are not limited by 35 U.S.C. § 287 (a).

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May 16, 2008 2334534

## CERTIFICATE OF SERVICE

I, the undersigned, hereby certify that on May 23, 2008, I electronically filed the foregoing with the Clerk of the Court using CM/ECF, which will send notification of such filing(s) to the following:

> William J. Marsden, Jr. FISH & RICHARDSON P.C.

I also certify that copies were caused to be served on May 23, 2008 upon the following in the manner indicated:

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